

1/27/15

ADDED more data points  
to conga line data +  
learned how to calculate  
Average speed...

Term	Symbol	Vector Scalar	UNITS
distance	$d$	S	<u>m</u> or km
displacement	$x$	V	<u>m</u> or km
speed	$s$	S	<u>m/s</u> or $\frac{\text{km}}{\text{hr}}$
velocity	$v$	V	$\frac{\text{m}}{\text{s}}$ or $\frac{\text{km}}{\text{hr}}$
acceleration	$a$	V	$\text{m/s}^2$



$$d_{\overline{AB}} = 9m$$

$$d_{\overline{BC}} = 6m$$

$$d_{\overline{CD}} = 9m$$

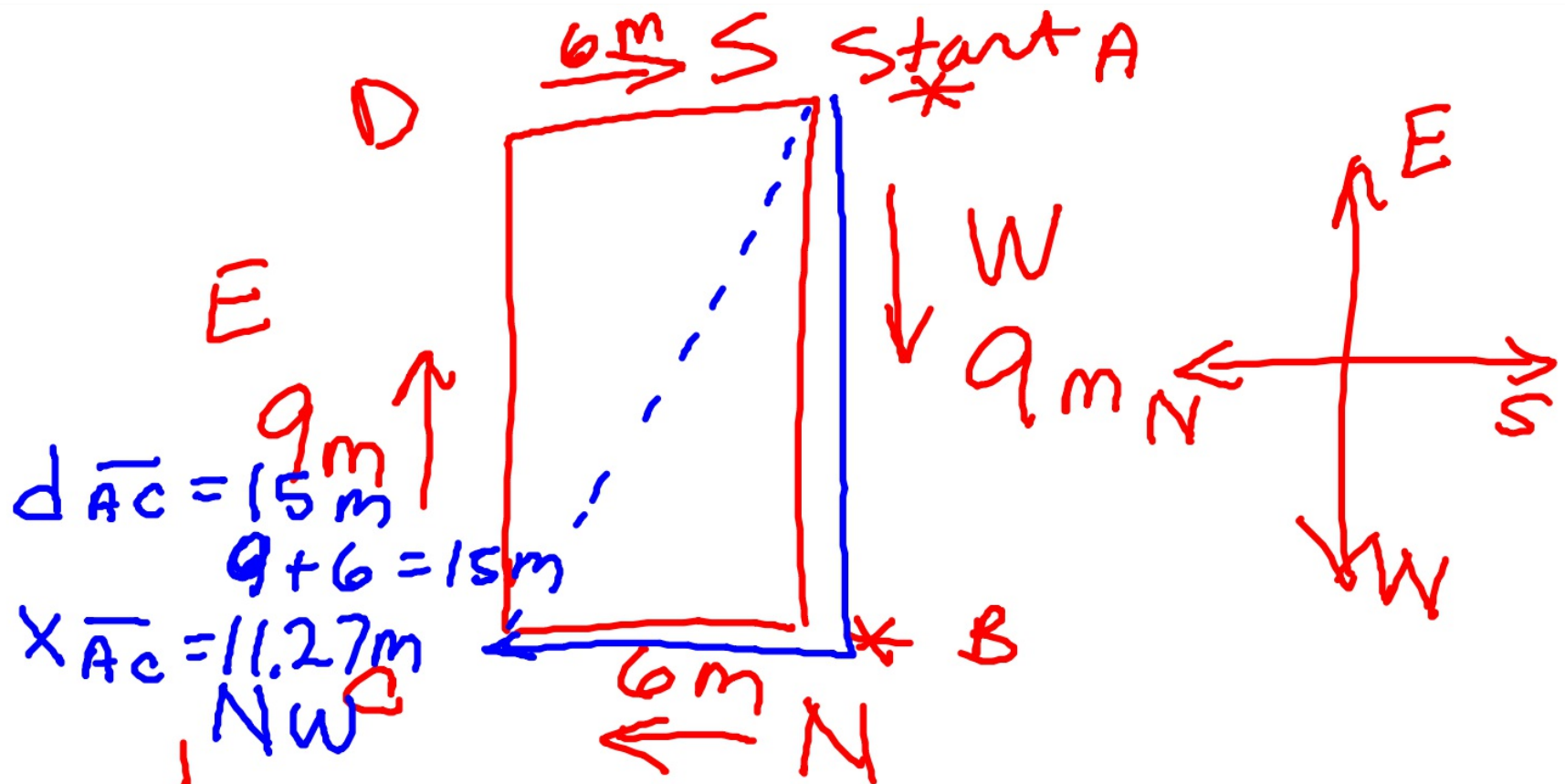
$$d_{\overline{DA}} = 6m$$

$$X_{\overline{AB}} = 9m \text{ West}$$

$$X_{\overline{BC}} = 6m \text{ N}$$

$$X_{\overline{CD}} = 9m \text{ East}$$

$$X_{\overline{DA}} = 6m \text{ S}$$



$$d_{AB} = 9m$$

$$d_{BC} = 6m$$

$$d_{CD} = 9m$$

$$d_{DA} = 6m$$

$$X_{AB} = 9m \text{ West}$$

$$X_{BC} = 6m \text{ N}$$

$$X_{CD} = 9m \text{ East}$$

$$X_{DA} = 6m \text{ S}$$



Ave Speed  $\frac{d}{t}$

the rate that I  
travelled a particular  
Distance.

Ave speed = average over a  
particular distance

Instantaneous speed = speed at  
a particular instant

A - B (m)d	ERIC t (s)	s (m/s)
9m	10.19s	
9m	9s	
9m	8.07s	
9m	6.22s	
9m	6.41s	
9m	6.75s	
9m	5.87s	

B-C	mike
d (m)	t (s)
6 m	4.81s
6 m	5.72
6 m	4.68
6 m	5.00
6 m	4.25
6 m	4.96
6 m	4.75
6 m	4.72
6 m	4.60

C-D

SKYLER

d(m)

t(s)

9m

8.5

9m

8.28

9m

8.25

9m

8.34

9m

6.46

9m

7.22

9m

7.31

9m

6.91

9m

7.13



D-A	TAYLOR	
$d(m)$	$t(s)$	$S(m/s)$
6	5.31	
6	5.1	
6	5.0	
6	4.1	
6	4.03	
6	4.16	
6	3.97	
6	3.4	
6	5.1	

$$\begin{aligned} \text{average speed } S &= \frac{d}{t} = \frac{9\text{m}}{10.19\text{s}} = .883318 \\ &= .88 \text{ m/s} \end{aligned}$$

$$\frac{9\text{m}}{9\text{s}} = 1.00 \text{ m/s}$$